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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/689,114	10/12/2000	Hideo Shibahara	NEKW 17.876	6403

7590 12/13/2006
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EXAMINER

CALEY, MICHAEL H

ART UNIT PAPER NUMBER

2871

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/689,114

Applicant(s)

SHIBAHARA, HIDEO

Examiner

Michael H. Caley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4, 6-11, 13-18 and 20-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 2, 4, 6-11, 13-18, and 20-23 is/are allowed.
- 6) ☒ Claim(s) 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/26/06 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shibahara (U.S. Patent No. 6,317,188) in view of Hoyt (U.S. Patent No. 5,953,087).

Shibahara discloses a liquid crystal display panel having:

a pair of substrate structures (Figure 13 elements 6 and 13) having plural pixels where an image is produced (Column 3 line 64 – Column 4 line 3);

liquid crystal filling a gap (Figure 3 elements 10 and d) between the pair of the substrate structures and selectively making the pixels dark and bright for producing the image (Column 6 lines 12-16, 60-65);

column spacers (Figure 4 element 21) formed on one of the substrate structures of the pair and held in contact with the other of the substrate structures (Figure 4), at least one of the column spacers being formed with a matrix of the plural pixels (Figures 1 and 4), the matrix of the plural pixels being formed by rows and columns of the plural pixels (Figure 1; Column 4 lines 54-62); and

wherein the liquid crystal display panel is an In-Plane-Switching display panel (Column 3 lines 43-47).

Shibahara fails to disclose the display panel as having a sealing layer formed between the matrix of the plural pixels and a peripheral area. Shibahara also fails to disclose a reservoir integrally formed between the substrate structures and adapted to accept a part of the liquid crystal from between the pair of substrate structures to prevent increasing the gap. Hoyt, however, teaches a sealing layer formed between the matrix of the plural pixels and a peripheral area (Column 1 lines 26-34, Column 5 lines 27-31). Hoyt further teaches a reservoir (Figure 1 element 18) for preventing the pair of substrate structures from increasing the gap by accumulating part of the liquid crystal (Column 3 lines 40-62, Column 6 lines 39-49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a sealing layer as proposed in the display device disclosed by Shibahara. One would have been motivated to form the sealing layer to prevent contamination and leakage of the liquid crystal layer (Column 1 lines 26-34).

Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the display device disclosed by Shibahara to have a reservoir for

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preventing an increase in cell gap. One would have been motivated to incorporate such a reservoir in the display device disclosed by Miyachi to prevent deformation of the liquid crystal cell cavity and bubble formation (Column 1 lines 35-50).

Allowable Subject Matter

Claims 1, 2, 4, 6-11, 13-18, and 20-23 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Applicant's arguments and amendment (see Remarks filed 10/26/06) are persuasive in identifying that the prior art fails to disclose or suggest the combinations of limitations disclosed in independent claims 1 and 15. Specifically, arguments are persuasive in identifying that the prior art fails to disclose or suggest an In-Plane-Switching display panel having a reservoir as proposed and having column spacers occupying the pixel area range of from 0.050 percent to 0.150 percent, wherein no column spacers are formed in an area of the sealing layer (see Remarks Pages 12-13).

Response to Arguments

Applicant's arguments with respect to claim 24 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael H. Caley whose telephone number is (571) 272-2286. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael H. Caley
December 10, 2006